



DREDGING PUMPS

2018



BELL® PUMPS	4
• Overview	
• Characteristics	
• Production	
• Applications & Areas Of Operation	
STRONG POINTS	7
• Basic Design	
• Development	
• Spares & Services	
BELL® HEADS	10
• Sand Production Head	
• Flat Barge Head	
• Cutter Head	
• Auger Head	
• Double Cutter Head	
AVAILABLE OPTIONS	13
• Process Equipment	
• Process Instrumentation	
• Power Packs	
• Pipes & Hoses	
BELL® POWER PACKS	14
• Main Specifications	
BELL® WATER JET PUMPS	15
• Main Specifications	
BELL® BOOSTER STATIONS	16
• Main Specifications	
BELL® A-FRAME DREDGER 250	17
• Main Specifications	
• Dredging Pump Specifications	
• Bell Application	
BELL® CUTTER DREDGERS	18
• BCD 250 & 300	
• BCD 400	



**BELL®
PUMPS**

OVERVIEW



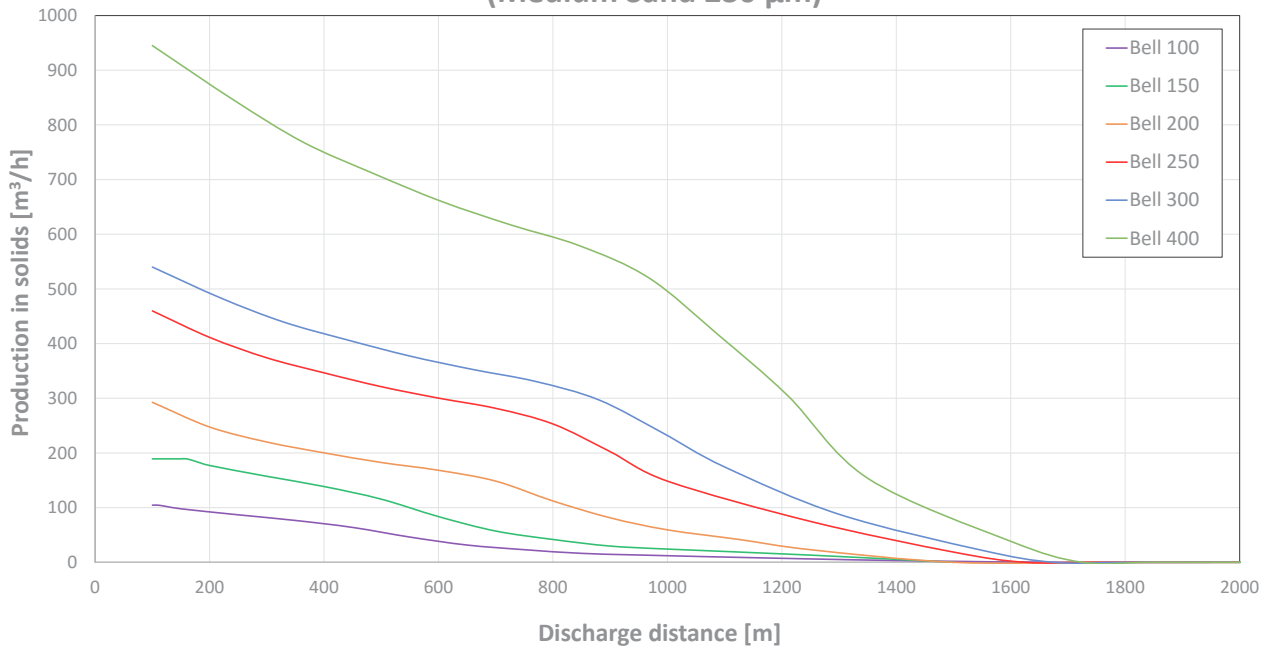
CHARACTERISTICS

	Units	BELL 100	BELL 150	BELL 200	BELL 250	BELL 300	BELL 400
Mixture capacity max	m ³ /h	300	500	800	1250	1800	3150
Pump speed approx.	rpm	1350	1300	1200	900	750	600
Max power at shaft	kW	30	75	110	190	300	500
Suction bore	Ø mm	100	150	200	250	300	400
Discharge piping	Ø mm	100	150	200	250	300	400
Spherical passage	mm	50	75	125	130	155	210
Weight (hydraulic, without head)	kg	550	950	1200	2000	3500	7750
Weight (electric, without head)	kg	1000	1375	1900	2900	4600	9150
Hydraulic Pressure	bar	250	250	250	250	300	300
Hydraulic Flow	L/min	85	195	290	425	600	1000
Hydraulic Cutter flow	L/min	15-20	15-20	35-50	35-50	70-110	70-110



PRODUCTION

PRODUCTION DIAGRAM BELL PUMPS
(Medium Sand 230 μm)



APPLICATIONS & AREAS OF OPERATION

Typical applications

- Dredging
- Dredging maintenance
- Sand / gravel mining
- Mobile booster station
- Mounted on ladder or crane
- Suspension from A-frame

Typical areas of operation:

- Harbours
- Rivers
- Canals
- Restricted areas
- Hopper barges



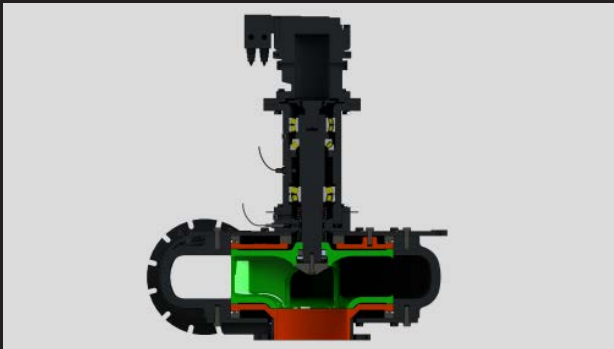
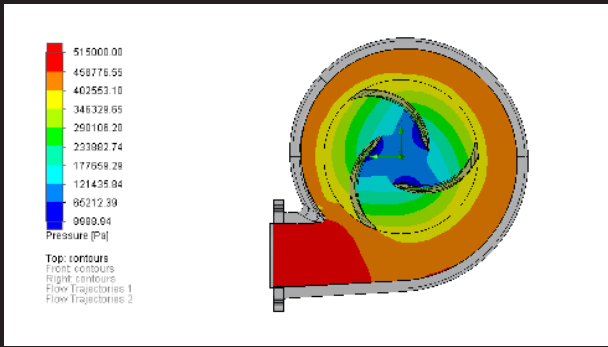




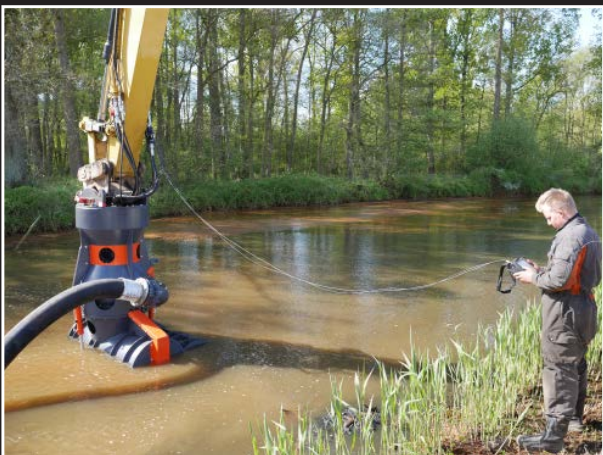
BASIC DESIGN

- Delivery from stock
- Heavy duty design
- Low maintenance
- Proven design
- Compact
- Multifunctional
- Low cost
- Large spherical passage
- Various suction heads available
- Changeable wearing parts
- Double mechanical seal





- **ADJUSTABLE NIBHARD WEAR PLATES**
- **ADJUSTABLE NIBHARD IMPELLER**
- **DOUBLE MECHANICAL SEAL**
- **OPTIONAL SENSORS**



DEVELOPMENT

- Continuous improvement of pump design
- Flow simulations for higher efficiency
- Lifetime extending safety features like our double mechanical seal

SPARES AND SERVICES

After Sales Department:

- Components with short delivery time
- Complete package of spare parts
- Advice and support
- Involved and dedicated team

Bell Field Service:

- Warranty and after sales services
- Training courses (in house and on site)
- Technical check-ups
- Service in remote areas





SAND PRODUCTION HEAD



FLAT BARGE HEAD



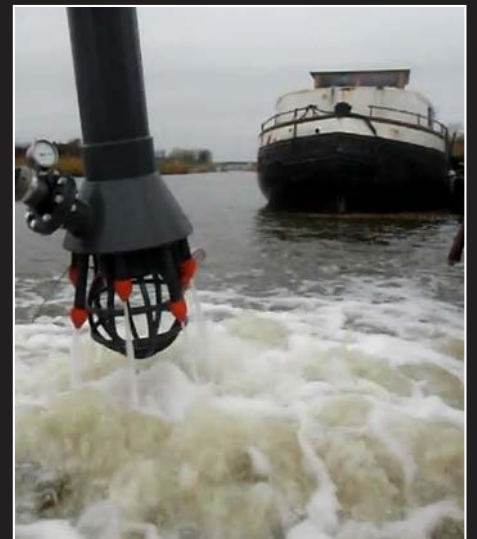
CUTTER HEAD



AUGER HEAD



DOUBLE CUTTER HEAD



SAND PRODUCTION HEAD

- Jet-water pipe and nozzles
- Suspension from crane or A-frame
- High production of solid material

FLAT BARGE HEAD

- Jet-water pipe and ring around head
- Suspension from crane or A-frame
- Discharge barges



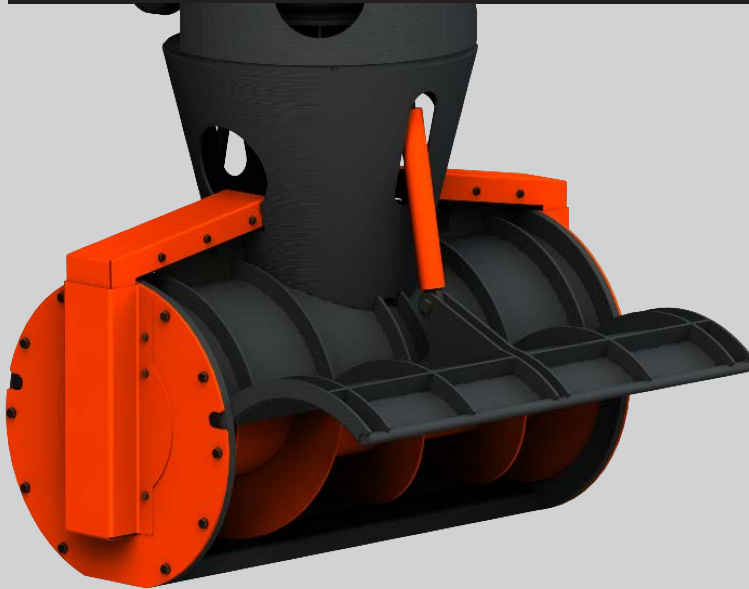
CUTTER HEAD

- Separate hydraulic powered cutter
- Fixed suspension on crane or ladder
- Designed for removal of packed sand



AUGER HEAD

- Dredging with less turbidity
- Used in polluted areas
- Less water is taken from the area
- Used for levelling soil under water



DOUBLE CUTTER HEAD

- Dredging piles
- Suspension from cable





PROCESS EQUIPMENT

- Booster stations
- Bell water jet pumps

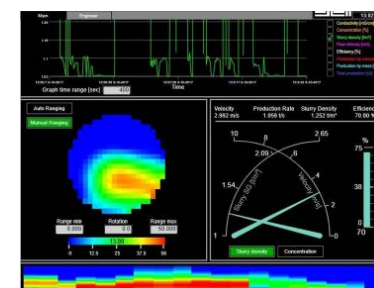


PROCESS INSTRUMENTATION

- Non-nuclear density meter
- Flow meter
- Bell sensors

BELL SENSORS

- Water ingress sensor
- Discharge pressure
- Pump speed
- Depth measurement



PIPES AND HOSES

- Discharge hoses including floats
- Discharge over land (Steel / HDPE)
- Self floating hoses
- Hydraulic hoses
- Jet-water hoses
- Geotubes





BELL® STAND-ALONE POWER PACKS AVAILABLE FOR ALL BELL DREDGING PUMPS & HEADS

	POWER	FLOW PUMP 1	FLOW PUMP 2
BELL 100 STAND-ALONE POWER PACK	60 kW	85 L/min.	20 L/min.
BELL 150 STAND-ALONE POWER PACK	126 kW	195 L/min.	20 L/min.
BELL 200 STAND-ALONE POWER PACK	194 kW	290 L/min.	50 L/min.
BELL 250 STAND-ALONE POWER PACK	253 kW	425 L/min.	50 L/min.
BELL 300 STAND-ALONE POWER PACK	338 kW	600 L/min.	110 L/min.
BELL 400 STAND-ALONE POWER PACK	653 kW	1000 L/min.	110 L/min.





BELL® AUXILIARY POWER PACKS AVAILABLE FOR ALL BELL DREDGING PUMPS

BELL 150 AUXILIARY POWER PACK

- Power: 110 kW
- Flow: 195 L/min.

BELL 200 AUXILIARY POWER PACK

- Power: 129 kW
- Flow: 290 L/min.

BELL 250 AUXILIARY POWER PACK

- Power: 194 kW
- Flow: 425 L/min.



BELL® WATER JET PUMPS

- Diesel or hydraulic driven
- Fast dry priming
- On open skid or in closed sound-attenuated canopy
- Available for all Bell sand production heads and flat barge heads



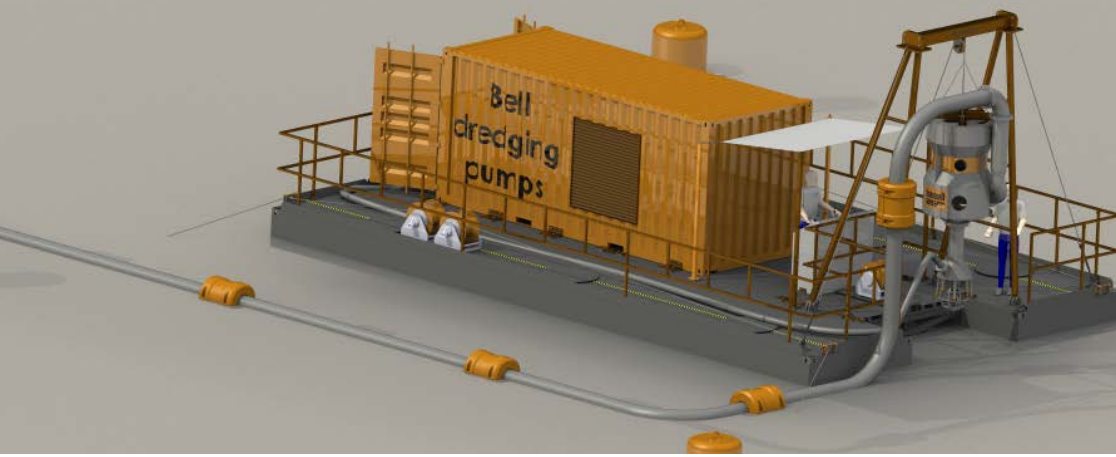
BELL® BOOSTER STATIONS AVAILABLE FOR ALL BELL DREDGING PUMPS

Bell booster pumps can be used when pumping beyond the maximum discharge distance of the dredging pump is required. With multiple booster pumps in the discharge pipeline the material can be dredged miles away!

The Bell booster pump is placed in a frame with a built-in diesel tank at the bottom. In the upper part of the frame multiple ventilation grids are installed as well as doors for easy maintenance on the diesel engine. The pump itself is located outside of the canopy for easy coupling of the hoses.

BELL BOOSTER STATIONS	POWER
100	55 kW
150	96 kW
200	143 kW
250	237 kW
300	338 kW
400	560 kW





A-FRAME DREDGER 250

Main specifications

Length	12.192 mm
Width	7.376 mm
Height	6.090 mm
Design draught	607,2 mm
Total weight	± 35.000 kg
Total installed power	516 kW
Max river flow rate	3 m/s

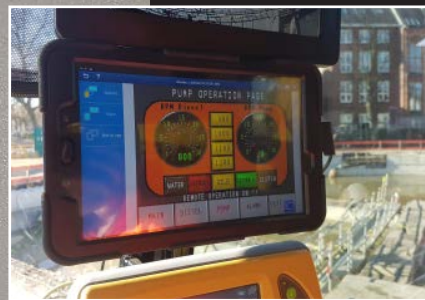
Dredging pump specifications

Dredging pump	BELL 250
Max mixture capacity	1250 m ³ /h
Pump speed	900 rpm
Max power at shaft	190 kW



Bell Dredging Pumps APP

Thanks to our newly developed application, it is now possible to remotely control your booster station, power pack or water jet pump! Imagine you have 3 mile long discharge pipe line with multiple booster stations in between. With the Bell app on your phone or tablet you can now start up, monitor and control all the booster stations without leaving the cabin of your excavator or dredger. Any notifications like fuel level or oil pressure will be shown on the screen, so you can take action much sooner when one gets critical.





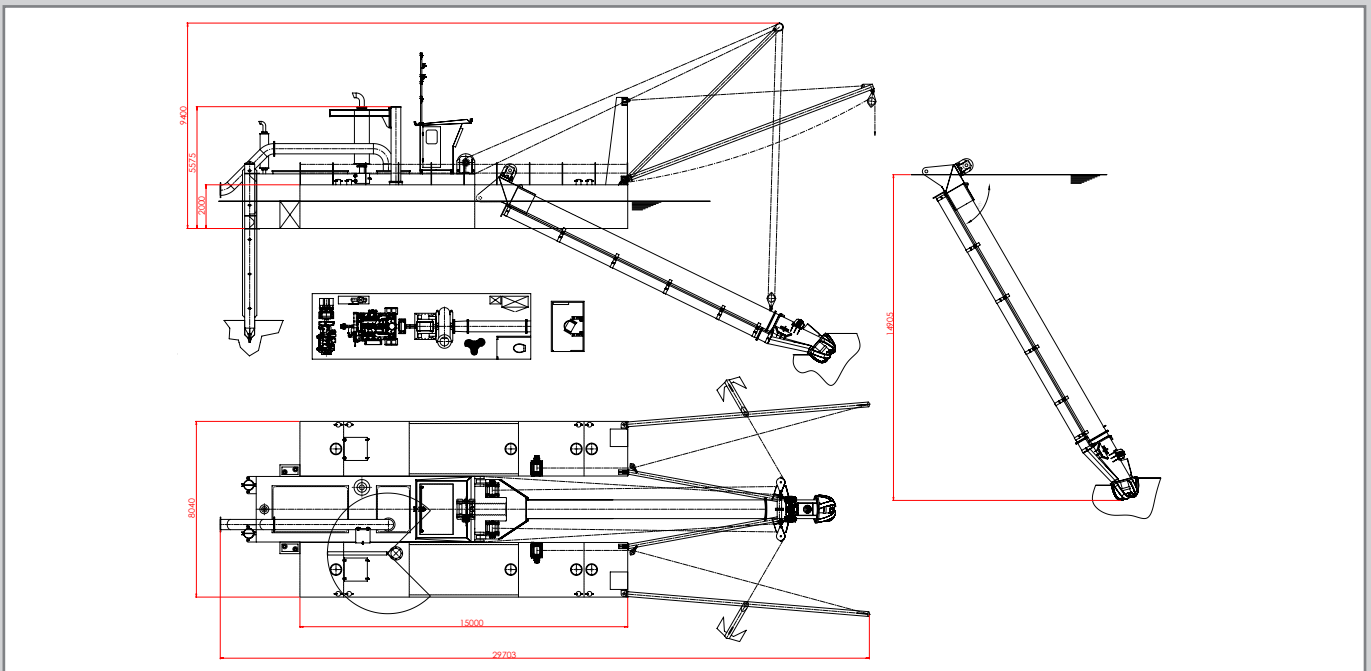
BELL CUTTER DREDGERS 250 & 300



BELL CUTTER DREDGER 250

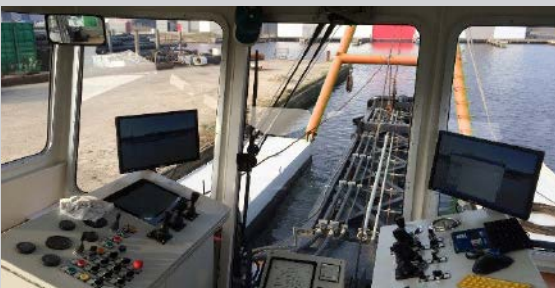
- Dredge pump: BELL 250
- Dredge capacity (water & solids): 1250 m³/hr
- Dredge capacity in dry volume (max.): 250 m³/hr
- Stone size diameter (max.): 130 mm
- Installed power on the dredge pump: 190 kW
- Power source dredger: Diesel engine
- Positioning entities: 2x mooring winches & 2x spud poles

BELL CUTTER DREDGER 400



BELL CUTTER DREDGER 400

- Dredge pump: BELL 400
- Dredge capacity (water & solids): 3150 m³/hr
- Dredge capacity in dry volume (max.): 630 m³/hr
- Stone size diameter (max.): 210 mm
- Installed power on the dredge pump: 500 kW
- Power source dredger: Diesel engine
- Positioning entities: 2x mooring winches & 2x spud poles



bell

DREDGING PUMPS



member of **DIESEKO GROUP**

MORE INFORMATION:
BELLDREDGINGPUMPS.COM

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